L0894695045- Kane
Phillips, Thom LF
ILD 980902134
SF/HRS

CERCLA QUICKSCORE

Site Summary and Recommendation

The Phillips Thom Landfill was placed on the Comprehensive Environmental Response, Compensation, and Liability Information System (CERLCIS) in 1984. The inactive 22 acre landfill is located south of the Route 30 bypass and west of Albright road in Montgomery, Kane County, Illinois. The landfill originated as two parcels; one owned by Mr. David Thom (4.75 acres in size) and the other by the Phillips Estate (17.25 acres in size). Only 9.25 of the 17.25 acres were utilized while the entire 4.75 acre parcel was land filled. . The Thom parcel was excavated in 1957 for its gravel resources. After the 4.75 acre area had been excavated to a clay layer, at an approximate depth of eight to ten feet, the Phillips section was leased and excavated to the same level. Sometime in 1963 the excavating ended and the landfill operations began, starting with the Thom Property and later the Phillips Property.

Bordering the site to the south are residences, to the west and north farm fields, and to the east commercial properties. Further out to the south and west are more residential and industrial areas. Aurora is located 2 miles northeast of the site and the Fox River is 0.5 miles to the east. Bohr Avenue divides the site into two sections. In 1996, the northern section had exposed waste materials and was poorly vegetated. The southern section essentially was void of any vegetation and had a loose sand and gravel surface. No final cover material was noted on either section. In 2007, the site had changed notable with the addition of multiple self storage builds, paved parking areas, driveways, and landscaped areas. There was no evidence of any exposed waste material.

Through the course of several CERCLA investigations groundwater contamination was defined as the urgent environmental issue at this site. In1976 seven groundwater monitoring wells were installed on-site and three more at a later date. According to a 1986 Ecology and Environment report groundwater samples taken in 1980 revealed on-site PCB concentrations of 25 parts per million (ppm) and off-site levels at 0.12 ppm. During the 1996, SIP Inspection several volatile and semivolatile organic and inorganic substances were detected at numerous on-site sample locations. On-site groundwater samples had elevated levels of: chloroethane, acetone, 2-butanone, benzene, toluene, ethylbenzene, xylene, arsenic, lead, and cyanide. MCLs (Maximum Contaminant Levels) were exceeded for benzene which was detected at 51 parts per billion (ppb) (5 ppb MCL), ethylbenzene 4,300 ppb (700 ppb MCL), xylene 18,600 ppb (10,000 ppb MCL), and lead 35 ppb (15 ppb MCL). RALs (Removal Action Levels) were also exceeded for ethylbenzene 4,300 ppb (1,000 ppb RAL), and naphthalene 410 ppb (100 ppb RAL).

Off-site sampling was performed for drinking water only. One sample location had elevated levels of lead 307 ppb (15 ppb MCL), and manganese 185 ppb (150 ppb MCL). In 2002, due to the lack of progress in the Illinois EPA's Voluntary Program, the Illinois EPA re-sampled six residential wells near the site. These samples were analyzed for the full target compound list (TCL) and did not report any levels above a detection limit.

Current site conditions have substantially changed and reduced the threat from the Soil Exposure Pathway. The original areas with exposed material is now covered by, buildings, parking areas, or roadways. The areas not covered have plantings that indicated that they have been landscaped and would be vegetated with grass. It also appears that the area has been raised several feet. This would further limit people being exposed to the surface waste. The Illinois EPA has no specific information on the development of this area due to the site withdrawing from the Site Remediation Program in 2000. Previous on-site soil sampling had levels three times background for: trichloroethene, 4-methylphenol, naphthalene, 4-chloraniline, 2-methylnaphthalene, phenanthrene, fluoranthene, pyrene, butylbenzyphthalate, di-n-octylphthalate, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, magnesium, mercury, nickel, selenium, thallium, zinc, and cyanide. RALs were exceeded for, arsenic which was detected at 87 ppm (8 ppm RAL), chromium 510 ppm (200 ppm RAL), cyanide 37.4 ppm (12 ppm RAL), and total Polynuclear Aromatic Hydrocarbons (PAHs) 1430 ppm (500 ppm RAL).

Based on the fact that facts that the disposal area is now covered and that the most recent residential well samples did not report any contaminant above a detection limit; the site no longer generates a score above the 28.5 threshold needed to advance in the CERCLA investigative process. Therefore it is recommended that the site be designated as a No Further Action (NFA) and be moved to the archive portion of CERCLIS.

****** CONFIDENTIAL ******
******PRE-DECISIONAL DOCUMENT ******
****** SUMMARY SCORESHEET ******
****** FOR COMPUTING PROJECTED HRS SCORE ******

****** Do Not Cite or Quote ******

Site Name: Phillips Thom LF

Region: 5

City, County, State: Montgomery IL

Evaluator: Mark Wagner

EPA ID#: 980902134

Date: 10/8/2008

Lat/Long:

T/R/S:

Congressional District: 14

This Scoresheet is for:

Scenario Name: Groundwater

Description: Current no residential release.

	S pathway	S^2 pathway
Ground Water Migration Pathway Score (S_{gw})	3.45	11.9025
Surface Water Migration Pathway Score (S_{sw})	0	0
Soil Exposure Pathway Score (S_s)		
Air Migration Score (S_a)		
$S^2_{gw} + S^2_{sw} + S^2_s + S^2_a$		11.9025
$(S^2_{gw} + S^2_{sw} + S^2_s + S^2_a)/4$		2.975625
$/ (S^2_{gw} + S^2_{sw} + S^2_s + S^2_a)/4$		1.73

υ Pathways not assigned a score (explain):

TABLE 3-1 --GROUND WATER MIGRATION PATHWAY SCORESHEET

Factor categories and factors	Maximum Value	Value Assigned	
Aquifer Evaluated:			
ikelihood of Release to an Aquifer:			
1. *Observed Release*	550	0	
2. Potential to Release:			
2a. Containment	10	10	
2b. Net Precipitation	10	1	
2c. Depth to Aquifer	5	3	
2d. Travel Time	35	35	
2e. Potential to Release [lines 2a(2b + 2c + 2d)]	500	390	
3. Likelihood of Release (higher of lines 1 and 2e)	550		390
Waste Characteristics:			
4. Toxicity/Mobility	(a)	100	
5. Hazardous Waste Quantity	(a)	100	
6. Waste Characteristics	100		10
Targets:			
7. Nearest Well	(b)	20	
8. Population:			
8a. Level I Concentrations	(b)		
8b. Level II Concentrations	(b)		
8c. Potential Contamination	(b)	53	
8d. Population (lines 8a + 8b + 8c)	(b)	53	
9. Resources	5		
10. Wellhead Protection Area	20		
11. Targets (lines 7 + 8d + 9 + 10)	(b)		73
Ground Water Migration Score for an Aquifer:			
12. Aquifer Score [(lines 3 x 6 x 11)/82,5000][c]	100		3.45090909090909
Ground Water Migration Pathway Score:			
13. Pathway Score (S_{gw}), (highest value from line 12 for all aquifers evaluated)[c]	100		3.45090909090909

[a] Maximum value applies to waste characteristics category
[b] Maximum value not applicable
[c] Do not round to nearest integer

TABLE 4-1 --SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET

Factor categories and factors	Maximum Value	Value Assigned	
Watershed Evaluated:			
Drinking Water Threat			
Likelihood of Release:			
1. Observed Release	550		
2. Potential to Release by Overland Flow:			
2a. Containment	10	10	
2b. Runoff	10	0	
2c. Distance to Surface Water	5		
2d. Potential to Release by Overland Flow [lines 2a(2b + 2c)]	35	0	
3.Potential to Release by Flood:			
3a. Containment (Flood)	10	10	
3b. Flood Frequency	50	7	
3c. Potential to Release by Flood (lines 3a x 3b)	500	70	
4. Potential to Release (lines 2d + 3c, subject to a maximum of 500)	500	70	
5. Likelihood of Release (higher of lines 1 and 4)	550		70
Waste Characteristics:			
6. Toxicity/Persistence	(a)	10000	
7. Hazardous Waste Quantity	(a)	100	
8. Waste Characteristics	100		32
Targets:			
9. Nearest Intake	50		
10. Population:			
10a. Level I Concentrations	(b)		
10b. Level II Concentrations	(b)		
10c. Potential Contamination	(b)		
10d. Population (lines 10a + 10b + 10c)	(b)		
11. Resources	5		
12. Targets (lines 9 + 10d + 11)	(b)		
Drinking Water Threat Score:			
13. Drinking Water Threat Score [(lines 5x8x12)/82,500, subject to a max of 100]	100		0
Human Food Chain Threat			
Likelihood of Release:			
14. Likelihood of Release (same value as line 5)	550		70
Waste Characteristics:			
15. Toxicity/Persistence/Bioaccumulation	(a)	50000	
16. Hazardous Waste Quantity	(a)	100	
17. Waste Characteristics	1000		32
Targets:			
18. Food Chain Individual	50		
19. Population			
19a. Level I Concentration	(b)		
19b. Level II Concentration	(b)		
19c. Potential Human Food Chain Contamination	(b)		
19d. Population (lines 19a + 19b + 19c)	(b)		
20. Targets (lines 18 + 19d)	(b)		
Human Food Chain Threat Score:			
21. Human Food Chain Threat Score [(lines 14x17x20)/82500, subject to max of 100]	100		0
Environmental Threat			
Likelihood of Release:			
22. Likelihood of Release (same value as line 5)	550		70
Waste Characteristics:			
23. Ecosystem Toxicity/Persistence/Bioaccumulation	(a)	50000000	
24. Hazardous Waste Quantity	(a)	100	
25. Waste Characteristics	1000		180

Targets:		
26. Sensitive Environments		
26a. Level I Concentrations	(b)	
26b. Level II Concentrations	(b)	
26c. Potential Contamination	(b)	
26d. Sensitive Environments (lines 26a + 26b + 26c)	(b)	
27. *Targets (value from line 26d)*	(b)	
Environmental Threat Score:		
28. Environmental Threat Score [(lines 22x25x27)/82,500 subject to a max of 60]	60	0
Surface Water Overland/Flood Migration Component Score for a Watershed		
29. Watershed Score[c] (lines 13+21+28, subject to a max of 100}	100	0
Surface Water Overland/Flood Migration Component Score		
30. Component Score (S_{sw})[c] (highest score from line 29 for all watersheds evaluated)	100	0

[a] Maximum value applies to waste characteristics category
[b] Maximum value not applicable
[c] *Do not round to nearest integer*